Computer use at MHATT-CAT

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This document explains how to utilize the MHATT-CAT computer and network resources. All questions should go to Dohn Arms, or Eric Dufresne if he is not around.

1 Using your computer on our network

1.1 MHATT-CAT network

There is a firewall between MHATT-CAT and the rest of the world. You can freely send traffic out on any port, but *no* traffic will get to you on *any* port. This is for security reasons. *Do not ask for a port to be opened for your computer.* We do not directly control the firewall, and have very few ports open for our own computers.

1.2 Connecting to the network

1.2.1 Automatic

The preferred way to connect to our network is to take advantage of our DHCP server. Simply set your computer to automatically find its IP address, and it should work. Almost every user that comes in follows this method.

1.2.2 Manual

If you *have* to have a fixed IP address, there are four set aside for this use. They are coordinated by the beamline staff member in charge of the experiment, so please talk to him/her beforehand. The user static IP addresses and names are:

user1: `164.54.156.251`
user2: `164.54.156.252`
user3: `164.54.156.253`
user4: `164.54.156.254`

The other settings needed for using a static IP address are:

domain name: **mhatt.aps.anl.gov**
gateway: `164.54.156.1`
primary DNS: `164.54.156.58`
secondary DNS: `164.54.156.5`
network mask: `255.255.255.0`

1.3 Network resource sharing under Windows

The first thing you must do if you want to share files under Windows is to enable the setting in your network setup for "Windows network file and printer sharing". Put your computer in the 'User' work-group with a name for your computer. Also, specify that the WINS server is `164.54.156.58`.

We have a Windows domain set up here being *MHATT*, but your computer will *not* be allowed to join it.

2 MHATT-CAT computers

2.1 DOE terms of use

```
                    NOTICE TO USERS
                    October 31, 2000

This is a Federal computer system and is the property of the United
States Government.  It is for authorized use only. Users (authorized
or unauthorized) have no explicit or implicit expectation of privacy.

Any or all uses of this system and all files on this system may be
intercepted, monitored, recorded, copied, audited, inspected, and
disclosed to authorized site, Department of Energy, and law
enforcement personnel, as well as authorized officials of other
agencies, both domestic and foreign. By using this system, the user
consents to such interception, monitoring, recording, copying,
auditing, inspection, and disclosure at the discretion of authorized
site or Department of Energy personnel.

Unauthorized or improper use of this system may result in
administrative disciplinary action and civil and criminal
penalties. By continuing to use this system you indicate your
awareness of and consent to these terms and conditions of use.
LOG OFF IMMEDIATELY if you do not agree to the conditions stated in
this warning.
```

2.2 UNIX/Linux computers

2.2.1 yoruba

This is currently the main server used during experiments. It's a SUN Ultra 10 running Solaris 2.8, sitting in the user area of station ID-C. This is the computer that runs *EPICS* and *spec*.[1]

Dohn Arms and Eric Dufresne takes care of this computer, as well as the *EPICS* setup. Don Walko takes care of the *spec* setup. Dohn Arms also takes care of software installed on the computer.

[1] Don Walko has written user manuals on how to use *spec*.

2.2.2 bantu

This will in the future be the main server used during experiments, replacing yoruba. It's a SUN Ultra 60 running Solaris 2.8, sitting in 432D common area. Currently, it acts as a NIS server for the `sun.mhatt.aps.anl.gov` domain, which consists of all the SUN computers running Solaris. This computer stores the account information and home directories (with a few exceptions) for all users of **watusi** and **medina**.

The user directories for the SUN accounts (where data is stored during experiments) can be accessed from Windows. For the a user 'fred', the network directory would be `\\bantu\fred`.

Dohn Arms takes care of accounts on this computer, as well as the software installed on the computer.

2.2.3 hydra

This is the main server of MHATT-CAT, and provides many services. It's a 1.2 GHz Athlon PC running Debian Linux 3.0. Dohn Arms takes care of this server. Users can request an account on this computer if wanted.

This computer serves the Windows network directories `\\hydra\common` and `\\hydra\software`, described below.

2.2.4 medusa

This is the CCD camera computer, and is to only be used in conjunction with such cameras. It is a Pentium 4 system with 1 GB of RAM. It runs Windows 2000, and supports our QMAX 650 and CoolSNAP CCD cameras. You must talk to the staff before using this computer.

2.3 Windows 2000 user accounts

There are several Windows 2000 computers around MHATT-CAT available for general use. If you or your group do not have an account, you can use "user" as the user and "sector7" as the password. Since this is a general account, realize that other people may alter, read, or delete your files. If you need an individual account, talk to Dohn Arms.

Currently, there is a 200 MB limit on the amount of files able to be kept on the desktop or in "My Documents". If you need more storage, there is a drive on each computer labelled "Storage" (normally `D:`) where files may be stored locally, and there is normally several GB of space available. You are free to put files here, but *please label them clearly and delete them (or move them to **hydra**) when you leave.* These "Storage" drives are shared on the Windows network as `common` directories for most of the computers running Windows 2000 or SAMBA, such as `\\chaos\common`, `\\idb-pc\common`, and `\\idc-pc\common`. This way you can access files stored locally on a particular computer easily.

Temporary storage of your data files when you are leaving should be done on `\\hydra\common`, as discussed in Sec. 4.1.

3 Printers

There are several network printers located around MHATT-CAT. You are free to use them for MHATT-CAT related purposes, but please keep personal use to a minimum. There are Windows 98 and Windows 2000 drivers available for our printers at `\\hydra\software\drivers\printers` on the network.

These are the names and addresses of the printers (described below):

copier.mhatt.aps.anl.gov: `164.54.156.75`
hp4mv.mhatt.aps.anl.gov: `164.54.156.72`
hp8000n.mhatt.aps.anl.gov: `164.54.156.73`
hpclj.mhatt.aps.anl.gov: `164.54.156.69`
hpojg95.mhatt.aps.anl.gov: `164.54.156.71`

3.1 copier

This is the copier/scanner/printer Canon ImageRunner 2200 located in the main room of the LOM, next to the front door. This is the best printer to print to, as it is the fastest printer, has many printing options, and does double siding.

If you need to print to transparencies, a special type is required. Ask the staff where they are. Other types of transparencies can damage the equipment (and **you** will be responsible for any repair costs).

3.2 hp4mv

This is the HP LaserJet 4MV printer located on the experimental floor located by the ID-D station. It is the one normally used for printing during a run in the D hutch, as it is the closest to those experiments.

This printer needs special transparencies for color printing. Ask the staff where they are.

3.3 hp8000n

This is the HP LaserJet 8000N printer located on the experimental floor located between the ID-B and ID-C stations. It is the one normally used for printing during a run in the B or C hutches, as it is the closest to those experiments.

3.4 hpclj

This is the HP Color LaserJet 4550N printer located in the main room of the LOM. It is a color laser printer, but takes a *long* time to warm up and prints rather slowly. It should only be used for print jobs where color is actually needed.

3.5 hpojg95

This is the HP OfficeJet G95 printer/scanner/fax located in the main room of the LOM. It's a color ink-jet printer. This printer currently works only with Windows, with drivers from HP which use a lot of memory and have been known to slow down computers.

4 Experimental data

Once you experiment is over, it's the users' responsibility to take care of their data files. Please remove all the other files from MHATT-CAT computers that are not data.

4.1 Storage

In Windows, the place to store files is in the `\\hydra\common` directory. Once you have safely moved them over to that disk, please delete your local files. Files are much safer on **hydra** than on any of the client computers.

Please put *all data* in one directory and clearly label it as to what experiment it came from: name of the principal investigator, hutch, and month and year of experiment (e.g. `smith_7idc_Mar2002`). Cryptically named files may be deleted quickly, since we would have no idea where they came from. It also make it a lot simpler to transfer, being in one place.

We will temporarily back up data, giving you time to make sure that it makes it home with you safely. *Do not expect us to permanently archive your data.* We will keep it at least a month; after that, we will delete it at our discretion.

It is your responsibility to contact us if you have corruption problems getting the data home, so we know to keep it safe until the problem is fixed.

4.2 Transfer

4.2.1 Electronic

One of the best ways to transport your data is to simply send it to a computer back home. You can use *ftp*, *scp*, or *sftp* to connect to a remote server to do the transfer.

4.2.2 CD burner

For Windows, there is a CD-R/RW drive on **chaos** in the user office (432D-006). You can temporarily send your data to that computer on the `\\chaos\common` drive, then burn it to a CD-R disk from there. If your data is on the `\\hydra\common` directory, it might not be best to burn networked files directly to a disk; you should create a CD image then burn it (which is the safest way anyway), deleting the image afterwards. Blank CD-R disks are available from the stock room.

This CD drive will write to CD-RW disks, which can act like floppy disks using the DirectCD driver. You could simply copy your files to a formatted CD-RW disk.

There is a CD-R/RW drive on **hydra**, which is also in the user office. However, you will need help from the staff for using that one, as that computer is a main Linux server and *xcdroast* needs low level access. It can only burn CD-R disks currently.

4.2.3 Zip disk

Most computers (other than the UNIX ones) have a Zip drive on them. You can store files on a 100 MB Zip disk. If you need the use of a 250 MB Zip drive, the ones on **chaos** (for Windows) and **hydra** (for UNIX/Linux) are of that type.